

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Presently Amended) Apparatus for use with a computer system having a
2 memory, a local storage and an existing directory service operating in the
3 memory, the apparatus providing naming and life cycle services for a distributed
4 object and comprising:
5 a moniker object which contains an identifier that universally identifies an
6 instance of the distributed object and a moniker name; and
7 a first stream object which automatically substitutes the moniker object for
8 the distributed object when during the streaming of the distributed object is
9 streamed out from the memory to the local storage so that the moniker object is
10 stored in the local storage in place of the distributed object.
- 1 2. (Original) Apparatus according to claim 1 wherein the first stream object
2 substitutes the moniker object for the distributed object when the distributed
3 object is persisted.
- 1 3. (Presently Amended) Apparatus according to claim 1 further comprising a
2 second stream object which automatically substitutes a reference to the
3 distributed object for the moniker object when during the streaming of the
4 moniker object is-streamed in from the local storage to the memory so that a
5 reference to the distributed object is created in memory in place of the moniker
6 object.

- 1 4. (Original) Apparatus according to claim 3 wherein the second stream object
2 substitutes the moniker object for the distributed object when the distributed
3 object is resurrected.
- 1 5. (Original) Apparatus according to claim 1 wherein life cycle services are
2 provided by associating with the moniker object a predefined policy which
3 specifies how and when life cycle services are performed.
- 1 6. (Original) Apparatus according to claim 5 further comprising a life cycle services
2 object which responds to the predefined policy by controlling the life cycle of the
3 distributed object.
- 1 7. (Original) Apparatus according to claim 1 further comprising a runtime repository
2 which includes a database of moniker name-object reference pairs.
- 1 8. (Original) Apparatus according to claim 7 further comprising a directory service
2 factory object which responds to the moniker name by instantiating a directory
3 service adapter object for applying the moniker name to the existing directory
4 service when the runtime repository does not contain the moniker name.
- 1 9. (Original) Apparatus according to claim 1 wherein the distributed object is
2 instantiated in accordance with an object model and the apparatus comprises an
3 object model adapter which processes distributed objects instantiated with the
4 object model.
- 1 10. (Original) Apparatus according to claim 9 wherein the object model adapter
2 returns a reference to the distributed object together with a moniker object
3 associated with the distributed object.

1 11. (Original) A method for use with a computer system having a memory, a local
2 storage and an existing directory service operating in the memory, the method
3 providing naming and life cycle services for a distributed object and comprising
4 the steps of:

- 5 (a) instantiating a moniker object which contains an identifier that universally
6 identifies an instance of the distributed object and a moniker name; and
7 (b) using a first stream object to automatically substitute the moniker object
8 for the distributed object ~~when~~ during the streaming of the distributed
9 object ~~is streamed~~ out from the memory to the local storage so that the
10 moniker object is stored in the local storage in place of the distributed
11 object.

1 12. (Original) A method according to claim 11 wherein step (b) comprises the step
2 of:

- 3 (b1) using the first stream object to substitute the moniker object for the
4 distributed object when the distributed object is persisted.

1 13. (Original) A method according to claim 11 further comprising the step of:

- 2 (c) using a second stream object to automatically substitute a reference to the
3 distributed object for the moniker object ~~when~~ during the streaming of the
4 moniker object ~~is streamed~~ in from the local storage to the memory so that
5 a reference to the distributed object is created in memory in place of the
6 moniker object.

1 14. (Original) A method according to claim 13 wherein step (c) comprises the step
2 of:

- 3 (c1) using the second stream object to substitute the moniker object for the
4 distributed object when the distributed object is resurrected.

- 1 15. (Original) A method according to claim 11 further comprising the step of:
2 (d) associating with the moniker object a predefined policy which specifies
3 how and when life cycle services are performed.
- 1 16. (Original) A method according to claim 15 further comprising the step of:
2 (e) instantiating a life cycle services object which responds to the predefined
3 policy by controlling the life cycle of the distributed object.
- 1 17. (Original) A method according to claim 11 further comprising the step of:
2 (f) creating a runtime repository which includes a database of moniker name-
3 object reference pairs.
- 1 18. (Original) A method according to claim 17 further comprising the step of:
2 (g) instantiating a directory service factory object which responds to the
3 moniker name by instantiating a directory service adapter object for
4 applying the moniker name to the existing directory service when the
5 runtime repository does not contain the moniker name.
- 1 19. (Original) A method according to claim 11 wherein the distributed object is
2 instantiated in accordance with an object model and wherein the method
3 comprises the step of:
4 (h) instantiating an object model adapter which processes distributed objects
5 instantiated with the object model.
- 1 20. (Original) A method according to claim 19 wherein step (h) comprises the step
2 of:
3 (h1) returning a reference to the distributed object together with a moniker
4 object associated with the distributed object.

1 21. (Original) A computer program product for use with a computer system having a
2 memory, a local storage and an existing directory service operating in the
3 memory, the computer program product providing naming and life cycle services
4 for a distributed object and comprising a computer usable medium having
5 computer readable program code thereon including:

6 class code for instantiating a moniker object which contains an identifier
7 that universally identifies an instance of the distributed object and a moniker
8 name; and

9 class code for instantiating a first stream object which automatically
10 substitutes the moniker object for the distributed object when during the
11 streaming of the distributed object is-streamed out from the memory to the local
12 storage so that the moniker object is stored in the local storage in place of the
13 distributed object.

1 22. (Original) A computer program product according to claim 21 wherein the class
2 code for instantiating a first stream object comprises method code for substituting
3 the moniker object for the distributed object when the distributed object is
4 persisted.

1 23. (Original) A computer program product according to claim 21 further comprising
2 class code for instantiating a second stream object which automatically
3 substitutes a reference to the distributed object for the moniker object when
4 during the streaming of the moniker object is-streamed in from the local storage
5 to the memory so that a reference to the distributed object is created in memory
6 in place of the moniker object.

1 24. (Original) A computer program product according to claim 23 wherein the class
2 code for instantiating the second stream object includes method code for
3 substituting the moniker object for the distributed object when the distributed
4 object is resurrected.

- 1 25. (Original) A computer program product according to claim 21 wherein the class
2 code for instantiating the moniker object further comprises a method for
3 associating with the moniker object a predefined policy which specifies how and
4 when life cycle services are performed.
- 1 26. (Original) A computer program product according to claim 25 further comprising
2 class code for instantiating a life cycle services object which responds to the
3 predefined policy by controlling the life cycle of the distributed object.
- 1 27. (Previously amended) A computer program product according to claim 21 further
2 comprising program code for creating a runtime repository which includes a
3 database of moniker name-object reference pairs.
- 1 28. (Original) A computer program product according to claim 27 further comprising
2 class code for instantiating a directory service factory object which responds to
3 the moniker name by instantiating a directory service adapter object for applying
4 the moniker name to the existing directory service when the runtime repository
5 does not contain the moniker name.
- 1 29 (Original) A computer program product according to claim 21 wherein the
2 distributed object is instantiated in accordance with an object model and wherein
3 the computer program product comprises class code for instantiating an object
4 model adapter which processes distributed objects instantiated with the object
5 model.
- 1 30. (Original) A computer program product according to claim 29 wherein an
2 instantiated object model adapter comprises a method for returning a reference
3 to the distributed object together with a moniker object associated with the
4 distributed object.

- 1 31. (New) Apparatus according to claim 1 wherein the first stream object comprises
2 means operable during the streaming of the distributed object out from the
3 memory to the local storage for storing the distributed object in a persistent
4 repository that is different from the local storage.
- 1 32. (New) Apparatus according to claim 31 wherein the persistent repository is
2 located remotely from the local storage.
- 1 33 (New) A method according to claim 11 further comprising:
2 (c) using the first stream object during the streaming of the distributed object
3 out from the memory to the local storage to store the distributed object in a
4 persistent repository that is different from the local storage.
- 1 34. (New) A method according to claim 33 wherein the persistent repository is
2 located remotely from the local storage.
- 1 35. (New) A computer program product according to claim 21 wherein the first
2 stream object comprises program code operable during the streaming of the
3 distributed object out from the memory to the local storage for storing the
4 distributed object in a persistent repository that is different from the local storage.
- 1 36. (New) A computer program product according to claim 35 wherein the persistent
2 repository is located remotely from the local storage.
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